

Claims

1. Vane diffuser for separators to separate a liquid phase and/ or particulate material from a gas flow, comprising a distribution chamber (14) that communicates with the inlet pipe stub
5 (2) of separator (1), a top plate (9), a bottom plate (10), and a plurality of curved, parallel vanes (11), *characterized in* that the vanes (11) have a varying thickness in the flow direction.
2. Vane diffuser as claimed in claim 1, *characterized in* that the vanes (11) have such a
10 varying thickness in the flow direction that the cross-sectional area of the diffuser channels are provided with the most even expansion obtainable.
3. Vane diffuser as claimed in claim 1 or 2, *characterized in* that the vanes (11) have such a
15 varying thickness in the flow direction that if the vane length is defined along the centre line from the leading edge to the trailing edge of a vane, the maximum thickness of the vane will lie within 20-70 % of the length defined from said leading edge.
4. Vane diffuser as claimed in any preceding claim, *characterized in* that the vanes (11)
20 have such a varying thickness in the flow direction that if the vane length is defined along the centre line from the leading edge to the trailing edge of a vane, the ratio between the maximum thickness and the length of a vane is in the range 0.05 – 0.15.
5. Vane diffuser as claimed in any preceding claim, *characterized in* that each vane (11) has
25 a cavity (20) that communicates with the pressure side (17) of said vane (11) through perforations or slots (21) in order to allow all of or part of any liquid or any particulate material settling on the vane's pressure side (17) to flow into said cavity (20) and further
down below the vane diffuser through a passage (22) in the bottom plate (10).
6. Vane diffuser as claimed in any preceding claim, *characterized in* that below the bottom
30 plate (10) there is arranged an accumulation space (23) for liquid flowing through any passage (22).
7. Vane diffuser as claimed in claim 6, *characterized in* that a channel 24 is arranged to drain liquid from the accumulation space (23).

8. Vane diffuser as claimed in any preceding claim, *characterized in* that side walls (26) are arranged around the circumference of the top plate (9) to avoid liquid that might be accumulated on top of top plate (9) to run down in front of the outlet from the diffuser channels (13).

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9. Vane diffuser as claimed in claim 8, *characterized in* that a draining channel (25) is arranged to drain liquid accumulated on the top plate (9) of the vane diffuser.